Suramin (Sodium Salt)

**Product Description**

Suramin is a bis-polysulfonated naphthylurea that can bind to and inhibit PDGF, FGF, EGF, TGF-β, SIRT1, and SIRT5 (Stein). Suramin also blocks G protein binding to G protein-coupled receptors (GPCRs), inhibits the binding of calmodulin to recognition sites on the ryanodine receptor-1 (IC$_{50}$ = 4.9 µM), and non-selectively antagonizes P2X and P2Y purinergic receptors (10 - 100 µM; Klinger et al., Charlton et al.). This product is supplied as the sodium salt of the molecule.

<table>
<thead>
<tr>
<th>Molecular Name:</th>
<th>Suramin (Sodium Salt)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alternative Names:</td>
<td>BAY 205; Germanin; NF 060</td>
</tr>
<tr>
<td>CAS Number:</td>
<td>129-46-4</td>
</tr>
<tr>
<td>Chemical Formula:</td>
<td>C$<em>{51}$H$</em>{40}$N$<em>{6}$O$</em>{23}$S$_{6}$ • 6Na</td>
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<tr>
<td>Molecular Weight:</td>
<td>1435.2 g/mol</td>
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<tr>
<td>Purity:</td>
<td>≥ 99%</td>
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<tr>
<td>Chemical Name:</td>
<td>8,8'-[carbonylbis[imino-3,1-phenylenecarbonylimino(4-methyl-3,1-phenylene)carbonylimino]]bis-1,3,5-naphthalenetrisulfonic acid, hexasodium salt</td>
</tr>
</tbody>
</table>

**Structure:**

![Suramin (Sodium Salt) Structure](image)

**Properties**

- **Physical Appearance:** A white to off-white solid
- **Storage:** Product stable at room temperature as supplied. Protect product from prolonged exposure to light. For long-term storage store with a desiccant. For product expiry date, please contact techsupport@stemcell.com.
- **Solubility:**
  - Water ≤ 100 mM
  - For example, to prepare a 10 mM stock solution in water, resuspend 10 mg in 697 µL of water.

Prepare stock solution fresh before use. Information regarding stability of small molecules in solution has rarely been reported, however, as a general guide we recommend storage in water at -20°C. Aliquot into working volumes to avoid repeated freeze-thaw cycles. The effect of storage of stock solution on compound performance should be tested for each application.

For use as a cell culture supplement, stock solution should be diluted into culture medium immediately before use.
Published Applications

DISEASE MODELING
- Attenuates fibrosis in limb muscles in mouse model of Duchenne’s muscular dystrophy (Taniguti et al.).

CANCER RESEARCH
- Inhibits angiogenesis and growth of various tumors and human cancer cell lines (McGeary et al.; Zaniboni; Stein).

IMMUNOLOGY
- Competitive inhibitor of reverse transcriptase and protects T lymphocytes against human immunodeficiency virus (HIV) infection in vitro (Carteau et al.).
- Kills human African trypanosomiasis parasites, potentially through preferential binding to parasite glycolytic enzymes (Fairlamb & Bowman; Barrett et al.).

References

Related Small Molecules
For a complete list of small molecules available from STEMCELL Technologies, please visit our website at www.stemcell.com/smallmolecules or contact us at techsupport@stemcell.com.

This product is hazardous. Please refer to the Safety Data Sheet (SDS).